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UREMIA*

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It was suggested that we follow our discussion of eclampsia and the toxemias of pregnancy of last month with a consideration of uremia at this meeting.

As in eclampsia, I trust we shall find that the condition under discussion offers greater possibilities in prevention than in treatment after it has once developed.

Uremia is a toxemia developing in the course of nephritis. Many cases of nephritis fit into one of two classes—(1) nephritis with edema, and (2) nephritis with nitrogen retention and high blood pressure. Cases of the latter type are particularly prone to eventuate in uremia, but it is worth mentioning that a swift removal of fluid from patients of the first type frequently initiates uremic coma. A concentration of toxin in the remaining body fluids is held responsible.

Why is it that a long standing nephritic will develop a headache, mental confusion and sink into coma? Why is it that some patients will remain confused and stuporous for days from this condition? Why will some patients without premonitory symptoms suddenly have a uremic convulsion? Just what is the individual factor which initiates the development of this symptom complex? Many explanations have been offered. As the name tells us, the condition has been blamed on an excessive amount of blood urea. This is the oldest view and one that is difficult to deny. An abnormally high urea content of the body fluids is the common finding in uremic states, and its estimation is most valuable in diagnosis and prognosis. While this is the rule, it is generally recognized that uremia does occur without an elevation in the amount of nitgogenous constituents of the blood, and hence we muust seek further for an explanation.

Cerebral edema was thought by Traube to be the causetive factor. This condition is found post mortem in many deaths in uremic coma. It is likely that this explains the efficacy of lumbar puncture in many cases.

Acidosis often plays a part, but is only an associated condition and due in part to a failure of the kidney to excrete sodium acid phosphate.

An unknown toxin resulting from perverted metabolism as a consequence of defective excretion is at present the generally recognized etiology.

Foster (The Harvey Lectures, 1920) has isolated a chemical, of undetermined structure, from the blood of uremics which when injected into animals has caused convulsions and death.

There is ample evidence to show that all these are factors and the cause is not a single one.

A failure of the kidneys to produce an internal secretion has been suggested as the cause. That the kidney has an internal secretion is, to the best of our knowledge, absolutely lacking in scientific confirmation even after the perusal of advertising literature on our desks.

Post-mortem examinations reveal no characteristic findings. Perhaps the most constant findings are discolored patches along the gastro-intestinal tract and even ulcerations of the bowel frequently occur. Analysis of these areas and of the contents of the canal show large amounts of urea and other nitrogenous constituents. From these findings, we conclude that the bowel is endeavoring to perform some of the eliminatve functions of its sick neighbors, the kidneys. This indicates to us how we may aid nature in our treatment.

The principal symptoms which are familiar to all of us, and hence will be only briefly mentioned, are referred to the nervous, respiratory and gastro-intestinal systems. The nervous symptoms often seen are convulsions, coma, transient paralyses, delirium and mania. Case reports of delusional insanity in chronic uremia have been presented.

Dyspnoea is frequent. It may be continuous or paroxysmal. The paroxysmal attacks differ in no

*Read before the Sussex County Medical Society, Lewes, Del., June 12, 1929.

way from the so-called renal asthma. Nitroglycerin usually gives prompt relief. Cheyne-Stokes breathing often precedes death.

Nausea, vomiting and diarrhea occur.

In making a diagnosis and estimating the prognosis both immediate and remote, two laboratory tests, when their results are added to the clinical picture, are of utmost importance. The tests which I refer to are the blood chemistry examination, particularly for urea nitrogen, and the phenosulphophthalein test.

The ability of the kidney to excrete phenophthalein may be tested by any of us. It requires little skill and less apparatus. In uremia values of less than 10% for the two hours are commonly obtained.

Nitrogenous constituents of the blood are greatly increased almost invariably. Values for non-protein nitrogen roughly parallel those of urea nitrogen; and, as the urea nitrogen is probably more frequently done, we shall discuss it more fully. The normal figure may be arbitrarily placed at 15 mgs. per 100 cc of blood. Any figure above this may be designated an increased amount. In stating this, we must at the same time remember that here as in all renal function tests, not one but repeated tests are of value, and a single high value maye be due to temporary cardiac disturbance, a dietary indiscretion or other extra-renal causes. In uremia the urea nitrogen often shows figures higher than 60 mgs. Generally speaking, the higher the figure the worse the prognosis.

It has been frequently stated that a rise of blood creatinine above 5 mgs. precludes the possibility of recovery. Numerous individuals have proven the fallibility of this rule, but it expresses the most likely outcome.

The blood uruea and the 'phthalein excretion usually indicate the same kidney condition. The exceptions to this are we believe most frequently due to the 'phthalein test. After all, this test tells us only the ability of the kidney to excrete 'phthalein and nothing else. There are undoubtedly many cases where kidneys shown to be damaged by other renal function tests will show a normal excretion of the dye. The reverse also occurs. This only serves to emphasize the great truth that here in nephritis and uremia as in all other diseases we must rely not on a single test, symptom or sign, but on all the available data as a whole.

Even after recovery from uremia, a persistently low phthalein output and high blood urea nitrogen means a poor prognosis. The general rule is that if 'phthalein excretion remains below 10% and the urea nitrogen above 40 mgs. per 100 cc of blood, the duration of life will be less than one year. Please note the word "remains."

These two renal function tests which we have so briefly commented upon are indicated in all cases of uremia and we repeat, when properly interpreted are invaluable both from a prognostic and diagnostic standpoint.

Treatment. The treatment of uremia must be prompt and vigorous in order to be effective.

Lumbar punctures as has been indicated are often helpful. In those cases characterized by convulsions and transient palsies, they seem to do most good, perhaps because cerebral edema is a factor in these cases.

Gastric lavage is indicated where there is vomiting and also a stomach tube should be passed for the purpose of introducing medication if swallowing is not possible. The medications to be introduced are the hydrogogue cathartics. Magnesium sulphate is most used. If ineffectual, elaterin or or compound jalop powder should be tried. Croton oil is seldom necessary. This promotion of elimination through the bowel is, we have been told by Dr. Thomas McCrae, the most important single measure in treatment. By bleeding we may hope to remove a large amount of toxin from the body but by purging we can remove it over a longer period of time and thus provide a longer "breathing space" for the kidneys. Colonic irrigations further promote elimination. They are not a substitution for purgation but an adjunct.

Bleeding is indicated in all cases where the condition of the patient appears critical. There is no limit to the amount. The condition of the patient is the guide. In a robust, full blooded individual with marked hypertension, we recently removed close to a quart of blood. Hypodermoclysis is a valuable method of replacing removed fluid and reducing toxemia. In many cases it acts efficiently as a diuretic.

The promotion of sweating is a measure which must be used cautiously, if at all. Allen, F. M. (Association Amer. Phys., May, 1929) states that

drugs which produce sweating and the use of moist heat are not well born by patients with cardio-vascular disease. It is true that when the blood shows an increased amount of uric acid, urea and creatinine the secretions of the sweat glands are laden with these substances. Allen believes that in some cases of chronic nephritis patients may be kept alive by stimulation of the sweat glands. However, he always uses dry heat. A laboring heart and beginning pulmonary edema are strict contraindications to sweating.

The prophylactic treatment of uremia concerns itself chiefly with the management of so-called chronic interstitial nephritis which is usually a cardio-vascular-renal disease. As a rule we see these patients only after they have developed symptoms, which is always late in the course of the disease when irreparable damage has already taken place.

The first thought in all these cases should be the eradication of focal infections. In early stages this may have a considerable effect; later the effects are usually not marked but even so probably delay the progress of the disease. This is the only measure we know of which seems to have any effect on the disease itself. Other therapeutic measures have for their purpose the protection of the damaged organs, prevention of dangerous complications and relief of symptoms.

The patient's life must be regulated to avoid excessive physical and mental effort. A complete cessation of activity is an advantage only in extreme cases. A consultant may perhaps be necessary to interpret various renal function tests and to estimate the degree of renal damage, but the regulation of the patient's life must be left to the personal physician who understands his patient's habits of drinking, eating, worrying and working.

Rest in bed is a most valuable method of procuring rest of the diseased organs. Dr. E. J. G. Beardsley in a clinic before the Jefferson Alumni Association this June emphasized the importance of this. In certain cases he has had his patients remain in bed one week out of every three. Obvious the circumstances of many would prevent this treatment.

Patients must be impressed with the dangers of overeating, over-drinking and of neglecting the bowels. The use of spices, peppers and all condiments is to be prohibited.

A restriction of protein intake must be used to reduce the nitrogenous constituents of the blood when they are high. It should be checked with blood urea estimations as is the dietary effect on blood sugar in diabetes. A low protein diet is also used on the principle of reducing substances which cause the kidneys to work harder. This latter use of the diet is almost entirely empiric as it is applied over a long time in a chronic condition when accurate observations are few and almost entirely limited to very short periods of time.

The salt free diet has had a tremendous vogue since the paper of Allen in 1920 (*Journal A. M. A. LXXIV, P.* 652). He claimed striking results in reduction of blood pressure. Unfortunately, others have been unable to confirm his results (O'Hare and Walker, Archives Internal Medicine, 1923, XXI, P. 653; Mosenthal and Short, American Journal Medical Science, 1923, CLXV, P. 531). The general concensus of authoritive opinion at present seems to be that in chronic nephritis without edema a rigid elimination of salt from the diet is the imposition of a useless hardship. Salt poor diets are used on the same principle as is protein restriction; viz., the reduction of substances that make the kidney work harder. This is also largely empiric. In salt poor diets, the food is prepared without the addition of sodium chloride and a small amount is served with each meal for the patient to use as desired. The usual allowance is 3 to 5 grams per day.

There is contradictory evidence regarding the daily fluid intake. An excessive fluid intake is the mainstay of treatment at various spas. On the other hand, there are cases where an increase in fluid intake is followed by a decrease in urinary output. With this in mind, it seems best to steer a mid course. A moderate intake of 1200 to 1500 cc per day should be used with increases if either artificial or natural sweating is marked.

In regard to drug therapy, we will mention only veratrum viridi. It is strongly upheld by many as having beneficial effects in hypertensive cases.

In concluding this brief and rambling review of our subject, let us return to our opening paragraph and consider if we may be so hopeful of preventing uremia as we are of preventing eclampsia. Certain it is that many chronic nephritic stave off the inevitable hand of death by

judicious living. At the same time we have seen cases, fortunately rarely, in which the kidneys progressively fail, and uremia develops in spite of all our efforts. As in a failing myocardium, so it is in failing kidneys—the therapeutic measure which is the mainstay of treatment is rest of diseased organs.

FROM OUR EXCHANGES

CHRISTIAN SCIENTISTS TAKE ACTION AGAINST CHURCH

For a long time we have suspected that there would be a gradual decline in Christian Science faith and number of adherents, and finally a virtual death of the sect. In a special to the *New York Times* under date of April 4th, it is announced that a bill in equity has been filed in the supreme court by the directors of the Christian Science Parent Church, headed by Mrs. Anna C. Bill, in an action against the directors of the First Church of Christ Scientist, the Mother Church, charging that Mrs. Mary Baker Eddy, the founder of the faith, plagiarized various authors in her "Science and Health" and other writings, and used morphine in the last ten years of her life. The Parent Church, organized in 1924, declares in the bill that having discovered last January evidence of plagiarism and drug using, it can no longer recognize the moral authority of Mrs. Eddy as a religious teacher. Declaring that the Mother Church directors view any connection between Christian Science and the medical profession as inconsistent with Mrs. Eddy's teachings, the bill asserts that this belief and practice is a menace to public health, that it is inconsistent with sound public policy, and that it tends to undermine all measures adopted in the United States to prevent disease and rationally to treat it. The bill goes on to say that the split from the church is due to the interpretation of Christian Science teaching, and the avowed assertion on the part of the dissenters that they would employ physicians and dentists and use drugs and medicine supplemented by mental healing. The controversy waxed warmer when it was discovered that Mrs. Eddy employed physicians and dentists and used drugs and medicine, including morphine, for relief of pain. Finally, it is charged that not only was Mrs. Eddy guilty of plagiarism but that Mrs. Eddy's use of morphine was not a legitimate one but that she was an addict, and for her last ten years, at her Chestnut Hill home, frequently received hypodermic injections of it from physicians and inmates of the house.

It will not be surprising to us if this squabble in the ranks of the Christian Scientists will be the undoing of the entire sect, and that Christian Science as a pure healing science not only will lose any popularity that it previously has had but that it soon will pass into the discard along with many other illogical beliefs and practices that have been employed for the relief of the sick.—*Jour. Ind. State Med. Assn.*, May, 1929.

STUDIES IN THE TREATMENT OF BRONCHIAL ASTHMA AND HAY FEVER*

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BRONCHIAL ASTHMA

There is no disease more mysterious and elusive than bronchial asthma, as to both cause and cure, and no disease in the practice of medicine requires more painstaking study if a partial or complete relief is hoped for. The successful treatment of bronchial asthma depends largely on the diagnosis of its cause, or at least the elimination of organic disease with dyspnea or dyspneic attacks. The course which I pursue and find most satisfactory is as follows:

1. A thorough and exhaustive history should be taken because much can be learned from the history as to the patient's habits, his environment, his occupation, his food, and whether his attacks are seasonal or perennial in type. He should be thoroughly questioned as to the previous medical history, as many cases of asthma have been preceded by acute attacks of bronchitis, influenza, pregnacy or chronic thyroidism.

2. A complete physical examination should be made in order that cardiac dyspnea or nephritic dyspnea may be excluded, and the thorax should be thoroughly examined to exclude mediastinal neoplasms or aneurysms.

3. A complete roentgen-ray picture of the sinuses should be taken, especially if headache is the predominating symptom.

4. A thorough nasal and pharyngeal examination is indicated if there are symptoms of nasal obstruction, or if there is constant sneezing accompanying the attack.

5. If the case is an extremely obscure one, a complete blood analysis must be done. In several instances a high blood sugar and high blood urea have been found, denoting the beginning of organic diseases, and on the institution of proper treatment a complete alleviation of the asthmatic symptoms was experienced. The blood calcium should be estimated in all cases, as a low blood calcium is extremely significant.

6. Last, but not least, a thorough cutaneous test, with all proteins and all pollens, should be

* Read before the New Castle County Society, Wilmington, Del., January 22, 1929.

performed. The bacterial proteins I have practically discontinued using, because I have found them in many cases unreliable and misleading. However, occasionally I have made cultures of the separate organisms found and recovered from the sputum, and I have tested with these organisms, with the result that positive reactions have been seen. If a case does not react to any protein or pollen after repeated tests, it has been my practice to classify that case as bacterial until proved otherwise. Here let me emphasize the importance of a thorough cutaneous test. I feel sure that many patients operated on for deflected septum, polyps, enlarged ethmoids or submucous resections could have been spared these operations and better results have been obtained had a thorough cutaneous test been performed. It would be a presumption for me to suggest in what types of cases operation is indicated, but I do feel that any one who is suffering from bronchial asthma should not be operated on until an exhaustive examination has been done and a thorough history has been taken.

After I have eliminated all organic diseases and have definitely found the case positive after complete testing, it is my procedure immediately to eliminate the offending protein and place the patient under observation for return of symptoms. If the condition is not relieved, specific desensitization is carried out. If relief or temporary relief results, the patient is kept under observation.

There is a group of cases with definite asthmatic history and symptoms in which sensitization to pollen proteins, food stuffs, animal epidermal products, and so forth, can be definitely eliminated. These cases fall in the group of "Essential or Reflex Bronchial Asthma". All of them have a chronic infection, either of the bronchi, nasal accessory sinuses or both. Post-mortem studies of the bronchi from these cases, show, besides mucus and cellular exudate within the bronchi, more or less extensive ulcerations of the epithelial lining, cellular infiltration of the submucosa or even peri-bronchial tissues, thickening of the walls of the bronchi due to connective tissue overgrowth. Bacteriological studies show that the types of bacteria found vary from time to time, but it apparently makes no difference what bacteria are present, irritation by bacterial toxins keeps up the pathological changes in the walls of the bronchi, and exudate formation continues. In such cases we have ulcers or raw surfaces in the bronchi thru which bacterial toxins, mucus and cellular exudate, in various stages of hydrolysis, is absorbed and so brings about sensitization to the proteins of the exudate. If the exudate formation keeps up and the ulcers persist, further re-absorption will take place and will correspond to the injection of toxic dose of a specific protein into a sensitized animal producing a clinical picture of asthma. Walker[1], and others, have shown that it was possible to sensitize animals to the bacterial proteins and their experiments tend to show that such was the case. Undoubtedly, sensitization to bacterial proteins takes place in some instances. In his experiments, Walker did not use negative controls and thought that the skin reactions he obtained were allergic instead of toxic. Eiman[2] has shown that in order to differentiate between allergic and toxic skin reactions with bacterial suspensions or toxins, one should always run controls on normal individuals. He has also shown that most cases of Essential Bronchial Asthma have become sensitized to their own bronchial or sinus secretions. It can readily be demonstrated that such is the case by intradermal tests. Patients who have become sensitized to their own secretions, give marked allergic reactions following the intradermal injection of .05 to .1 of a c. c. of their secretion filtrates; whereas, normal controls give negative reactions.

In treating a patient who has become sensitized to his own secretions, we attempt to desensitize the patient with his own secretion filtrates. We also administer autogenous bacterins and autogenous soluble toxins with the idea of establishing active immunity against the offending organisms. In some cases, we have to make two or three different lots at four to six week intervals, since the bacterial flora in the bronchial secretions often changes.

PREPARATION OF SECRETION FILTRATES, SOLUBLE TOXINS AND BACTERINS

Secretion Filtrates: Secretions from bronchi or sinuses are collected under sterile conditions and diluted with sterile salt solution, shaken with beads, and after 24 hours at room temperature, passed thru a Berkefeld filter. The filtrates are placed in rubber capped bottles and tested for sterility.

Soluble Toxins: A small amount of secretion is placed in brain broth medium in tall tubes, incubated for five days, and filtered thru a Berkefeld filter. Before use the filtrates are tested for sterility.

Bacterial Vaccines: They are prepared according to standard methods.

METHOD OF ADMINISTRATION

After the preparations have been made and properly bottled, 0.1 c. c. of all dilutions is injected intradermally and the resulting reactions if present are indicative of the dosage that should be given as the initial injection. I have found by experience that it is usually safe to use as the initial dose the amount of soluble toxin or secretion filtrate that does not give an area of hyperemia greater than 2cm. in diameter. If the intradermal reaction is more severe, then a smaller amount should be given to start with. The ideal method for administration would be to give the soluble toxin and bacterin together every fourth day, alternating with the secretion filtrate on the fourth day. The dosage should be gradually increased. Mild reactions can be ignored, but systematic reactions should be considered and the same dosage should be given again until a reaction is not experienced. Then the dosage should be increased.

It must be stated that, owing to the fact that this method has been used only for the last six months, it is impossible to state how long these patients will stay asthma free. But these patients had been up to the time of treatment constantly asthmatic without any remission of symptoms for longer than a day or so, and have gone in some instances as long as five months without symptoms. I therefore feel that the treatment is worth while, at least from an economic standpoint.

If the patient proves sensitive to the secretion filtrates and soluble toxins, they also are administered with the vaccine.

RESULTS OF TREATMENT

	No. of Cases	Relieved	Improved	Unimproved	Cases showing marked reaction
Patients treated with secretion filtrates who had hitherto been treated with bacterines without relief	56	28	18	10	15
Patients treated with secretion filtrates, soluble toxins and bacterines	86	54	18	14	—

In many instances the patient will prove negative to one or the other, and treatment should be carried out with the material showing reaction. Again, if relief is experienced, the patient is placed under observation and treatment is continued, but if no relief is noticed, then special therapy is resorted to.

SPECIAL TREATMENTS

1. The Quartz Light.

Regardless of the fact that there may or may not be a calcium deficiency, the quartz light following the infra-red ray is used with marked beneficial results. I used quartz light in these cases, regardless of normal blood calcium, chiefly because they were mostly among children who were definitely anemic and poorly developed physically, with definite evidence of rachitis, and whose living conditions were so poor that they had no opportunity to be in the sunlight. I also found it beneficial in adults with a dry cough, with extremely tenacious fibrous sputum, and in adults with poor physical development who had little opportunity for exposure to the sun's rays.

Relief in the acute attacks of asthma seems definite from exposure to the infra-red rays followed immediately by the ultra-violet rays. My technic, therefore, in all these cases has been first to expose the patient back and front to the infra-red rays and then to follow immediately with quartz light irradiations of varying intensity and distance from the patient's body. As a result of this procedure thirty-one cases were cured; seventeen were relieved, and two were not relieved.

2. Roentgen Ray.

Treatment with the roentgen ray unquestionably exerts a favorable influence on chronic asthma. Just what the action may be has not yet been determined. Harkavy reported a number of cases treated by this method with marked improvement, and he believed that he was dealing with unresolved pneumonia, as diagnosed by roentgenograms. Waldbott believes that the benefits are derived from a stimulation of the lymphatic system. Groedel and Lossen reported a series of forty-five cases in forty-one of which moderate improvement followed roentgen ray therapy.

3. Endocrine Therapy.

In many of these asthmatic cases, and especially in children, there is definite evidence of

endocrine dyscrasia. The predominating set of symptoms are those of hypo-adrenia and hypotension, weak cardiac action and pulse, together with nervous symptoms suggestive of neurasthenia. Frequently, cases are seen occurring in women at the beginning of or during the climacteric, or during or at the beginning of pregnancy. Again, cases are seen associated with hyperthyroidism or hypothyroidism. Cases are also seen associated with postpituitary disease, especially in children. It has been my procedure in these cases to give epinephrine, from 2 to 5 grains (0.13 to 0.32 Gm.) three times daily, combined with postpituitary substance, from ⅛ to ½ grain (0.008 to 0.032 Gm.) or even 1 grain (0.065 Gm.) twice daily, and also thyroid extract, from ¼ to 1 grain (0.016 to 0.065 Gm.) twice daily, if the indications are sufficient.

Although endocrine therapy as a whole is more or less disappointing, some cases respond so readily with improvement lasting for years, if not indefinitely, that this treatment is well worth considering when especially indicated.

4. **Drug Therapy.**

Epinephrine chloride, 1:1000, in from 5 to 15 minim (0.3 to 1cc) doses, still ranks first for its rapidity and efficiency in controlling asthmatic attacks, and it has also been my experience in several instances that if for some reason a patient has not been relieved by any other method, he may in time, if kept under the influence of small doses of epinephrine, or prevented from having a severe attack by the administration of epinephrine on the slightest sigh of an asthmatic seizure, become asthma free.

Here also should be mentioned ephedrine, the alkaloid first obtained by Nagai in 1887 from the Chinese drug ma huang. Since its discovery, considerable chemical work has been done on the alkaloid, but the drug has never been adequately standardized because of the fact that until recently it was not considered therapeutically important. In chemical composition ephedrine is allied closely to epinephrine. Scientific studies have shown that the physiologic effects on circulation, smooth muscle and secretions are the same qualitatively as those of epinephrine. It stimulates the central nervous system and depresses the heart, but these effects are elicited ordinarily by toxic doses. Quantitively, there are important differences in the effects of epinephrine and ephedrine. The effects of ephedrine are more persistent, though seldom as intense as those of a full dose of epinephrine. Ephedrine is absorbed from the intestinal tract, and, from the limited clinical data available so far, it has been found that the drug given by mouth is just as effective as by intramuscular injection and that the action begins about the same time after administration. Ephedrine is also much more stable. Solutions of ephedrine are stable indefinitely even when exposed to light and air, and are not decomposed on boiling. It is not a habit-forming drug. The lethal dose is from thirty-five to a hundred times that required to produce maximum physiologic effects, depending on the route of administration. Ephedrine sulphat may be given orally or hypodermically. Its effective administration by mouth is distinctly in its favor. When given intramuscularly there is no pain at the site of injection or marked local reaction. The usual single does is ¾ grain (0.05 Gm.) for adults; if ineffectual it may be increased. If with this dosage there is an indication of untoward symptoms, it should be reduced. The average daily dose is from ½ to ¾ grain (0.032 to 0.05 Gm.) given two or three times a day. The maximum daily dose is 4½ grains (0.28 Gm.). Children should receive doses in proportion to their size and age. Small children may be given the drug in aqueous solution in which 1 minim (0.06 cc.) contains ½ grain (0.032 Gm.) of ephedrine. Ephedrine solutions are slightly bitter. A word of warning may be justifiable at this point as to the toxicity of ephedrine.

In analyzing 100 cases of bronchial asthma in which ephedrine was used, the following untoward symptoms were encountered: Tremor, thirty cases; nausea, twenty-five; cardiac palpitation, fifteen; sleeplessness, twenty; drowsiness, five; bladded irritation, six; suppression of urine, three; increased blood pressure, five; relief of asthmatic symptoms, seventy-five; relief in severe asthmatic seizures, ten. As will be observed from the data, ephedrine cannot be considered an altogether harmless drug, and should be administered with care.

Potassium iodide in doses of from 10 to 20 grains (0.65 to 1.3 Gm.) three times daily is especially beneficial in asthmatic bronchitis, and should be an adjunct to the vaccine therapy, as

it has definite influence in increasing the secretions of the bronchioles and vesicles of the lungs, thereby aiding the action of the bacterin. It is also my custom to give potassium iodide for a few days before collecting the sputum for the autogenous vaccine.

Atropine sulphate in doses of from 1/50 to 1/100 grain (1.3 to 0.6 mg.), although helpful, is somewhat disappointing.

Digitalis preparations should not be overlooked when cardiac embarrassment is seen in the severe cases.

5. Operative Procedure.

As I am only an internist, it would be presumption on my part to discuss operative procedures in this disease, but I do feel that I can justly state from my observation of cases in which operations have been performed that many would have been more benefited had they been thoroughly studied from the allergic standpoint. Piness and Miller, Lintz and Kahn have shown the inadvisability of operative procedure on the nose and throat in allergic conditions. In an analysis of 250 cases of asthma treated, seventy-five patients, or 30 per cent, gave a history of one or more operations on the nose and throat with no improvement. After the cases have been studied thoroughly from the allergic standpoint and all treatment has failed, if definite obstructive symptoms are present, the operative measures should then be resorted to.

6. Climatic Change or Hospitalization.

As a last resort, climatic change or hospitalization should be used. It has been my experience that more or less relief can be obtained in about 60 to 70 per cent of all asthmatic persons if a thorough study of the case is made and the use of specific proteins and vaccines is adhered to. With the advent of nonspecific therapy, quartz light, roentgen ray and endocrine therapy, cases that have been hitherto considered hopeless are now benefited. Therefore, the patients not benefited in any way from the methods as laid down in this paper should be advised to make a definite change in their living conditions and a change of climate and environment. Patients who for financial reasons cannot avail themselves of the change of climate should be hospitalized and placed on a regular regimen; the most gratifying results have been obtained by such methods. There is no doubt of the fact that many patients can be permanently cured by keeping them free from asthma over a long enough period of time.

CONCLUSIONS

1. A case of asthma cannot be successfully treated without careful study; therefore, hospitalization for from three to four days is ideal.

2. Operations should not be performed in allergic cases unless a complete survey is first made, as many cases are made worse by too hasty operative procedures.

3. It has been proved that many patients develop a seeming sensitiveness to their own respiratory secretions, and when the filtrates derived from these secretions are used subcutaneously, marked relief has been experienced in cases otherwise unrelieved.

4. Caution should be used in the administration of these filtrates, as severe reactions have been experienced, in the form of asthmatic seizures.

5. One should not hesitate to retest if the evidence is sufficient that there is a specific protein sensitivity, as many patients may not show any reaction today to the test and may be markedly sensitive tomorrow.

HAY FEVER

Since 1565 the condition known as rose cold has been recognized by the profession practicing the healing art, but the medical world is indebted to Dunbar[3] for the exhaustive scientific proof, in 1903, of the specific action of pollen as a cause of hay fever. Dunbar's work opened the way to a new method of treatment founded upon immunology. John Bostock[4], in 1819, however, described the symptom complex of hay fever, but it was not until 1873 that Blackley[5] determined the real cause of the symptoms, namely, the pollen of plants. Curtis[6] in 1900, was the first to attempt to produce active immunity or to treat the condition; he used extracts of the whole plant.

It would be impossible to mention the names of all those who have been writing and reporting on the condition in the past ten years, but the mention of the names of I. Chandler Walker, Freeman, Koessler, Cooke, Goodale and Selfridge

is justified, since it is those men who have done most toward establishing the treatment of seasonal hay fever.

Dunbar isolated from the pollen what he thought was a true toxin, but later investigation established the fact that the active substances of the pollens are proteins with active antigenic properties. It is now possible to determine the specific pollen causing the hay fever symptoms in each case, and the condition can be alleviated, and in many cases prevented by treatment with an active antigenic extract prepared from the causative pollen.

It has been shown by the American Hay Fever Prevention Association that about 1 per cent of the population of the United States is susceptible to hay fever (about 1,100,000). The disease is common in the United States and in England, but is comparatively rare on the continent of Europe. It occurs only in regions in which flourish plants rich in pollen, and only when those plants have reached the flowering stage.

Hay fever is a condition of hypersensitiveness to pollen proteins, and is produced primarily by the inhalation of wind borne pollens. Only those wind borne pollens that are inhaled during normal respiration cause hay fever.

Scheppegrell[7] says: "While there are many plants whose pollens may cause hay fever reaction when applied to the nostrils, only pollens which float in the air and can reach the nostrils in the course of normal respiration are responsible for hay fever." This fact was definitely established by means of atmospheric pollen plates, which were exposed daily, during the hay fever season, at various stations. The plates were coated with glycerin and exposed for periods of 24 hours and then taken to the laboratory, stained, examined microscopically, and the pollens identified.

Although wind borne pollen is so widely distributed that the mucous membrane of every person comes in contact with it, yet only those sensitized develop hay fever. Just what causes this sensitiveness is not known, but I believe that it is largely due to a definite hypoadrenia, as all hay fever subjects show a denite symptomatology of lowered supra-renal function. However, this sensitiveness to pollen protein is greatly increased by the amount of the pollen inhaled, by nasopharyngeal disease or obstruction, by the lowering of a person's resistance, and also there seems to exist a definite hereditary sensitiveness to hay fever in certain families.

Ulrich[8] has pointed out that the sensitive membrane may have lost the faculty of rapidly converting the proteins into?

It can be proven positively by the cutaneous test with pollen extracts that each hypersensitive patient is definitely sensitive to a particular pollen.

Pollens are carried from one plant to another through the agency of the wind or by insects. The principal and most important factor in connection with hay fever is that only those pollens which are carried by the wind and which are therefore in the air can cause true hay fever.

Wind pollinated plants are distinguished by their inconspicuous flowers, which are devoid of scent or odor; their pollen is shed in large amounts and is light and buoyant.

On the other hand, insect pollinated plants are characterized by their bright colored, conspicuous flowers, which have a sweet scent or odor; their pollen is heavy and viscid and is shed very sparingly.

There are certain insect pollinated plants whose pollen will undoubtedly produce hay fever symptoms, if directly inhaled, but such pollens are never found in the air in any great quantity, and so are practically not a factor in the hay fever situation. The pollen of insect pollinated plants may precipitate an attack of hay fever under very exceptional circumstances; such, for example, as when the flowers are deliberately smelled, as might be done, particularly by children, or where the plants are grown in great profusion, in close contact with the patient, or even, in some cases, where the flowers are used for room decoration, but such symptoms would not long persist. The fact that true hay fever is in the large per cent of cases caused by the inhalation of the wind borne pollens only, eliminates the long list of insect pollinated plants which are popularly supposed to cause hay fever. The insect pollinated plants comprise alfalfa, clover, roses, dahlia, honeysuckle, rose of sharon, chrysanthemum, lily of the valley, aster, clematis, lilac, golden-rod, dandelion, white daisy, yellow daisy, sunflower, mountain laurel (rose bay or oleander) sugar beet, fruit trees (apple, apricot,

pear, peach, plum) and several other trees, including alder, fir, hemlock, pine, spruce, tamarisk (or flowering cypress) and willow.

Hay fever in the late spring and early summer is often erroneously designated rose cold or rose fever. Such a name is a misnomer, for hay fever at this time of the year is not caused by rose pollen, but by pollen of grasses. In like manner, fall hay fever is popularly attributed to pollen of the goldenrod, while in reality it is caused, in the majority of cases, by the ragweed, dwarf and giant, and eupatorium perfoliatum.

The pollen of corn, in spite of its toxicity, is rarely responsible for hay fever, because its size is so great that it cannot travel far; so, only by close proximity to a corn field can hay fever be induced. The above holds true for rye, oats and wheat.

Causes and Seasons for Hay Fever.—The hay fever seasons vary in different sections of the country, depending upon the flowering periods of the various hay fever plants, which are governed by climatic conditions.

In the following tables the most important pollens from a hay fever standpoint are indicated by an asterisk (*); the others are secondary, or of minor importance—

EASTERN STATES

(New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia)

NAME		TIME OF BLOOM (*Hay Fever Season*)
Cottonwood		March to April
Black Walnut		March to May
Oak		March to May
Sweet Vernal Grass		April to July
Orchard Grass	Goldenrod	April to August
Sheep Sorrel	Goldenglow	May to July
Yellow Dock	Daisy	May to July
June Grass	Rose	May to September
*Timothy	Dandelion	June to August
Redtop	Sunflower	June to September
Cocklebur	Corn	July to September
*Ragweed (Short and Tall)		August to October

SOUTHERN STATES

(North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Oklahoma, Texas)

NAME	TIME OF BLOOM (*Hay Fever Season*)
Mountain Cedar	December to Feb'y

The mountain cedar tree is found over a considerable part of Texas, Mexico and part of New Mexico.

Cottonwood	February to April
Black Walnut	March to May
Oak	March to May
Sweet Vernal Grass	April to July
Orchard Grass	April to August
Perennial Rye Grass	May to July
Sheep Sorrel	May to July
Yellow Dock	May to July
June Grass	May to September
*Bermuda Grass	May to September
*Timothy	June to August
Redtop	June to September
Spiny Amaranth	June to September
*Johnson Grass	June to October
Cocklebur	July to September
Redroot Pigweed	July to September
Careless Weed	July to October
*Ragweed	August to October

NEW ENGLAND STATES

(Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut)

NAME	TIME OF BLOOM (*Hay Fever Season*)
Cottonwood	March to April
Black Walnut	March to May
Oak	March to May
Sweet Vernal Grass	April to July
Orchard Grass	April to August
Sheep Sorrel	May to July
Yellow Dock	May to July
June Grass	May to September
Timothy	June to August
Redtop	June to September
Cocklebur	July to September
*Ragweed	August to October

ROCKY MOUNTAIN STATES

(Montana, Wyoming, Colorado, Utah, Idaho)

NAME	TIME OF BLOOM (*Hay Fever Season*)
Cottonwood	February to April
Black Walnut	March to May
Oak	March to May
Rabbit Bush	April to May
*Sweet Vernal Grass	April to July
Orchard Grass	April to August
Sheep Sorrel	May to July
Yellow Dock	May to July
*June Grass	May to September
*Timothy	June to August
Annual Saltbush	July to September
*Russian Thistle	July to September

This weed is not a true thistle and does not have colored blossoms. It is of pale yellow color, growing two or three feet high, widely branched. The flowers are inconspicuous and greenish white. This weed is exceedingly abundant and pernicious in the Northwest.

Redwood	July to September
*Sage Brush	July to September
Cocklebur	July to September
Mugwort	July to October
Ragweed	August to October
Slender Ragweed	Sept'ber to October

SOUTHWESTERN STATES

(Southwestern Texas, New Mexico, Arizona, Southwestern California)

NAME	TIME OF BLOOM (*Hay Fever Season*)
Mountain Cedar	Dec'ber to Feb'ry

The mountain cedar tree is found over a considerable part of Texas, Mexico and part of New Mexico.

*Cottonwood	February to April
Arizona Walnut	March to May
Arizona Ash	March to May
Oak	March to May
*Shad Scale	March to June
*Rabbit Bush	April to May
Sheep Sorrel	May to July
Yellow Dock	May to July
*June Grass	May to September
*Bermuda Grass	May to September
Johnson Grass	June to October
*Annual Saltbush	July to September
*Russian Thistle	July to September
Redroot Pigweed	July to September
Sage Brush	July to September
Cocklebur	July to September
*Careless Weed	July to October
*Slender Ragweed	Sept'ber to October

(Note: * Pollens of Primary Importance)

To be concluded in the September issue.

EDITORIAL

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PROPAGANDA

"Ye serpents, ye generation of vipers, how can ye escape the damnation of hell".—ST. MATTHEW 23:23.

There are two places where propaganda must be kept out. It must be kept out of the public schools, and it must be kept out of medical societies, at any sacrifice.

President Hoover just recently has shown sound Americanism in "The Strange Case of Anna B. Sutter", chief of the division of statistics and education of the Prohibition Bureau, who was about to use the public schools for purposes of propaganda.

The report of the Committee on Propaganda of the National Education Association, adopted by the Association at its meeting in Atlanta, states:

"Nothing would more quickly destroy confidence in public education than to allow it to become an instrument for the propagation of the social, economic, or religious convictions of factional groups.

"The propagandist seeks to inculcate one view-point. The teacher's mind is open on all subjects.

"The function of propaganda is to gain acceptance of a particular opinion, doctrine, or course of action, under circumstances designed to curb the individual's freedom of action. The function of education is to acquaint the individual with a variety of opinions, doctrines, or courses of action, so as to equip him intellectually to do his own thinking and to select his own courses of action. The main purpose of propaganda is to teach what to think, while the guiding purpose of education is to teach how to think."

Therein lies the danger in a Federal Department of Education, a Newton-Sheppard-Towner Act, etc.

Now we come to propaganda in the medical profession.

Heretofore the President of the American Medical Association has always had the privilege of freedom of thought and speech, and still has as far as his confreres are concerned, because their minds are "open to all subjects". Recently the right of the President to think and to express his thoughts has been challenged.

President W. S. Thayer in his address to the House of Delegates of the American Medical Association at Portland said:

"In the years that I have served with this Association, I have been sincerely impressed by the freedom and vigor of the discussions in this House, and at the same time by the fundamental restraint that has marked your actions . . . . .

"When in a country like ours the national government attempts to legislate for the whole country as to what we may or may not eat or drink, as to how we may dress, as to our religious beliefs or as to what we may or may not read, this is to interfere with rights that are sacred to every English-speaking man. This is no longer republican government; it is tyranny. In the long run we English-speaking people will not endure

tyranny . . . . . In time of peace we insist on certain local and individual liberties which we regard as rights.

"The Congress of the United States is not made up of men who desire to establish a tyranny. Far from it! But in certain ways, against the warnings of wise and temperate men such as the Chief Justice, they have passed laws which are intemperate, meddlesome and may justly be regarded as tyrannical."

Dr. Thayer is a physician of great eminence, author of many important medical articles, professor at Johns Hopkins, with enough honors and work not to seek more, and honored with the highest office the medical profession has to offer.

Clarence True Wilson, general secretary of the Methodist Board of Temperance, Prohibition and Public Morals, comes along and declares that President Thayer "railroaded" himself into office. He said: "I was in Washington looking on (at the 1927 A. M. A. Convention) when Dr. William Gerry Morgan was nominated for the presidency and without a campaign stood in a dignified way and was voted for and came within a few votes of being elected. But Dr. Thayer's wet crowd came down from Baltimore to put over a champion and they canvassed and crusaded and that unsuspecting body just barely did it, never thinking that there was a liquor deal in all that propaganda."

The President of the Medical Society of Delaware at the time of the Washington session was delegate from the Delaware Society and sat throughout the sessions of the House of Delegates that elected Dr. Thayer President of the A. M. A. and knows what went on at those meetings.

Each state medical society is entitled to at least one delegate in the House of Delegates of the A. M. A. In 1922 there were 152 delegates from the constituent associations, 15 from the scientific sections of the A. M. A., and the Medical Department of the Army, Medical Corps of the Navy, and Public Health Service were entitled each to one delegate. Maryland was entitled to two. At that election there were two nominations for President. Dr. Thayer received seventy votes of 136 cast. Any delegate has a right to make a nomination.

At the annual session of the American Medical Association recently held in Portland, Oregon, Dr. William Gerry Morgan of Washington, D. C., was elected President-Elect. There were no other nominations. One of the two delegates from Maryland was one of the two who represented Maryland at the Washington session that elected Dr. Thayer. Dr. Morgan is a high class gentleman and physician and is professor of gastroenterology at Georgetown University.

Such statements coming from a trailer or anybody else that Dr. Thayer was "railroaded" into office or that there was a "liquor deal" put over on that "unsuspecting body" comes from one talking in his ignorance or from a wilful falsifier of fact. Dr. Thayer is simply suffering the same sort of vicious attacks as must be endured by every other able, educated and sincere person who dares to disagree with Rev. Clarence True Wilson and men of his ilk. Such disagreement immediately results in attacks vitiating character, patriotism, intelligence, integrity and sincerity.

The American Medical Association has a membership of nearly one hundred thousand, comprising all the great scientists in the medical profession of the United States. It and its members are doing more for the health of the country, more to make living safe, than any other group of people, and often at a great financial sacrifice. A scientific society is no place for a professional reformer and propagandist. No professional reformer or professional propagandist has ever elected officers in the American Medical Association and it is hoped none ever will, because such an individual is out of place there and is very often if not usually a direct antithesis to what he claims to be; intemperate, meddlesome, and tyrannical. This Association will in the future as in the past place in office men of high calibre and integrity.

Bismuth Is Absorbed

Roentgenograms and reports of eleven cases made by MONTAGUE L. BOYD, Atlanta, Ga. (*Journal A. M. A.*, July 27, 1929), demonstrate that potassium bismuth tartrate is satisfactorily absorbed, as far as can be told by roentgenograms, if it is given in the proper dose, at the proper dose interval, with the proper technic, and with suitable massage of the buttack immediately after the injection and daily or several times daily throughout the course of treatment. Boyd stresses the need of keeping the needle full of water when it is inserted, so that in case the end is in a vein the blood can be made to flow back into the syringe the more readily.

DELAWARE PHARMACEUTICAL SOCIETY

Narcotic Legislation

For the past few months rumors have been current to the effect that a serious attempt would be made to thoroughly revise the Federal Narcotic Laws during the coming session of Congress. According to numerous stories emanating from Washington a bill was to be introduced with a view to completely separating the work of the narcotic division from the prohibition bureau where it is now being carried on and the creation of a separate bureau having full authority over narcotic law enforcement. It was further stated that the contemplated measure proposed to materially alter many of the provisions of existing statutes with respect to the use and distribution of narcotic drugs by physicians, dentists and pharmacists.

There is little likelihood of any objection being raised by the drug trade if the officials in charge of narcotic and prohibition enforcement should agree to the separation of these activities and the creation of an independent bureau for narcotic law enforcement, as such a move would likely be regarded as purely an administrative matter of little or no concern to the registered dealer. When, however, it is proposed to amend the law in other respects and particularly with reference to the legitimate distribution of narcotic drugs for proper medical uses, then, of course, the drug trade is interested and quite properly wants to know not only the nature, but the full extent of each new proposal that is to be offered.

When it became known that the preparation of such a bill had been undertaken by Representative Porter of Pennsylvania, the president of the National Drug Trade conference, acting in the interest of the entire drug trade, promptly took steps toward bringing about a conference on the subject, with a view to avoiding the possibility of conflict later on, in the event it should be found that the proponents of additional legislation were seriously considering problems related to and affecting the acts of dealers registered under the law to perform specific acts, in accordance with the law, and assurance has been received that all parties at interest will be given full opportunity to consider the measure and offer suggestions for its improvement when the final draft is ready for presentation.

With approximately 200,000 individuals and firms registered under the Harrison law to prescribe and dispense narcotic drugs for the relief of suffering humanity it is gratifying beyond measure to note in the official reports which have been submitted annually over a period of years by the chief officer of the narcotic division of the federal government that instances of law violations and disregard for the regulations by this vast number of registrants are so infrequent as to be regarded as altogether negligible in the major problem of law enforcement and this fact alone should restrain those who seem bent upon tinkering with the present law, which all well informed persons must admit has worked quite satisfactorily for more than fourteen years.

Regarding the number of addicts within our shores, we accept as authentic the reports submitted by the officials in charge of the work, which place the number at 100,000 in preference to the unsupported claims of self-appointed reformers and a sensational press, variously estimating the number of addicts to be anywhere from one million to three million, without offering the slightest proof in support of such wild and unbelievable claims.

Having no evidence to the contrary, we must accept as reliable and trustworthy such statements as appear in the public press from time to time concerning the illicit traffic in narcotics by organized bands of smugglers who appear to have little difficulty in eluding the coast guard and customs officials and landing vast quantities of dope on our shores for distribution through underground channels with the aid of disreputable peddlers until the stuff finally reaches the poor deluded victim of an uncontrollable habit. Accepting these statements at their face value we are forced to conclude that such a situation calls for strict enforcement of existing law rather than an appeal to congress for additional legislation.

It is utterly nonsensical for anyone to claim that additional legislation is necessary to reach the smuggler and his ally, the peddler of dope, for our customs law and the Harrison Narcotic act singly and combined clothe the authorities with ample power to suppress all such transactions and put the offenders behind the bars if and when they are caught and it would, therefore, seem most logical to assume that the law

of the land relating to customs and the entry and distribution of narcotic drugs should be enforced to the limit before looking elsewhere for relief. If, however, Representative Porter and those who are associated with him in this undertaking, including officials of the federal government charged with the enforcement of our customs and narcotic laws, really believe that additional legislation aimed at the smuggler and peddler might strengthen the hands of those whose duty it is to suppress this criminal traffic in narcotic drugs, then, of course, they need have no fear of opposition from the legitimate drug trade, provided no attempt is made to include in such legislation further restrictions upon those who are engaged in the lawful distribution of narcotics.

As we view this grave problem there is no necessity for tinkering with the regulatory provisions of the Harrison Act and we are quite firm in the belief that organized pharmacy would be found unalterably opposed to any drastic change in the present system of distributing narcotic drugs for medical use, should such a proposal be made. We are further of the opinion that the present situation calls for the concentration of the force of government in the detection and suppression of smuggling and it is safe to assume that once the smuggler is eliminated, the street peddlers will quickly disappear, for there is not a chance in a thousand of these parasites being able to obtain supplies through the regular channels of trade and this fact of itself fully justifies the position taken by the drug trade with respect to the regulatory provisions of the Harrison Act, which we insist needs little, if any change at this time.

In view of the fact that this bill will be introduced at an early date, it behooves physicians and pharmacists to be ready to enter protest against any change in the regulatory provisions of the Harrison Act relating to the prescribing or dispensing of narcotics by registered permittees and also to take action to counteract any attempt on the part of well meaning but misguided zealots to shape this proposed legislation so as to prohibit the prescribing or dispensing of narcotic drugs. Evidently this is the end which some of these self appointed reformers have in mind.

MISCELLANEOUS

Truth About Medicines

NEW AND NONOFFICIAL REMEDIES

Isarol-Ciba—Sulphonated Bitumen, N. F.—A preparation obtained by dry distillation of bituminous shale. The distillate is sulphonated with sulphuric acid and subsequently neutralized with ammonium carbonate. The product complies with the standards for sulphonated bitumen, N.F. It has the actions and uses of sulphoichthyolate preparations and substitutes (New and Nonofficial Remedies, 1929, p. 398). (*Jour. A. M. A.*, July 6, 1929, p. 33)

Ampoules of Pitressin.—An aqueous solution containing the pressor and diuretic-antidiuretic principle of the posterior lobe of the pituitary gland (betahypophamine) containing less than I unit of oxytocic activity per cc. It is standardized by the method of Hamilton and Rowe so that each cc. contains 20 pressor units (1 unit represents the pressor activity exhibited by 0.5 mg. of standard powdered pituitary U.S.P.). This product is used for temporary stimulation of blood pressure, for increasing the muscular activity of the bladder and intestinal tract, also for antidiuretic effect in diabetes insipidus. It is marketed in 1 cc. ampoules. Parke, Davis & Co., Detroit.

Ampoules of Pitocin.—An aqueous solution containing the oxytocic principle of the posterior lobe of the pituitary gland (alphahypophamine) containing less than 0.5 unit of pressor activity per cc. It is standardized by the U.S.P. method for pituitary, each cc. containing 10 International units. This product is used to stimulate uterine contractions for obstetric purposes. It is marketed in 1 cc. ampules. Parke, Davis & Co., Detroit. (Jour. A.M.A., July 13, 1929, p. 117)

Rabies Vaccine (Phenolized).—An antirabic vaccine (New and Nonofficial Remedies, 1929, p. 356) prepared according to the general method of David Semple (phenol killed). It is marketed in packages of 14 vials, each containing 3 cc., and in packages of 21 vials, each containing 3 cc. Terrell's Laboratories, Fort Worth, Texas. (*Jour. A. M. A.*, July 27, 1929, p. 283).

PROPAGANDA FORREFORM

The Glover Height-Increasing Fraud.—Clara Louisa Glover and "Bernard Bernard" (the latter's real name, according to the federal authorities, is Trappschuh) were engaged in exploiting a device for the alleged purpose of increasing the height of those who desired to be taller. Neither Glover nor Trappschuh is a physician. Trappschuh under the name "Bernard Bernard" publishes books on sexual subjects and fad diets. The device itself consisted essentially of a halter to be placed about the head of the user which permitted adjustment to a height which would barely enable the user to touch the floor with his feet. After investigation the device and the claims that were made for it the postoffice authorities closed the mails to "L. Glover, Specialist" and "L.

Glover" at Sausalito, California. Glover and Trappschuh then transferred their operations from California to Chicago, and advertised the device under the trade name "Glover Institute". Accordingly the postoffice authorities extended the fraud order to cover the name of the Glover Institute at Chicago. (*Jour. A. M. A.*, July 6, 1929, p. 53)

Gluco-Dextrin No. 1, Gluco-Dextrin No. 2 and Gluco-Dextrin No. 3 Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that Gluco-Dextrin No. 1, stated to be "Dextrose 45.75%, Dextrin 51.86%, moisture Q.S.", Gluco-Dextrin No. 2, stated to be "Dextrose 39.50%, Dextrin 45.61%, Lactic Acid 12.50%, moisture Q.S." and Gluco-Dextrin No. 3, stated to be "Dextrose 45.75%, Dextrin 51.86%, Potassium Bicarbonate 2%, moisture Q.S.", are marketed by the West Manufacturing Co. The first is apparently nothing more nor less than glucose U.S.P.; the second and third are apparently the same, with the addition of lactic acid U.S.P. and potassium bicarbonate, respectively. The Council points out that there appears to be no good reason why an official article and mixtures of official articles should be marketed under these proprietary names. It calls attention to unwarranted claims that are made in the advertising for these products. The Council declared Gluco-Dextrin No. 1, Gluco-Dextrin No. 2 and Gluco-Dextrin No. 3 unacceptable for New and Nonofficial Remedies because the one is an official article and the others are mixtures of official articles marketed under proprietary names with unwarranted therapeutic claims. (*Jour. A. M. A.*, July 13, 1929, p. 117)

Bacteriophage as a Therapeutic Agency.—The bacteriophage has been slow to gain acceptance as a possible agent in the warfare against infection. Recent investigations show the many difficulties connected with the successful use of bacteriophage and also the advantages which they have over other agents. While bacteriophage preparations give promise of eventually becoming valuable additions to the physician's armanentarium, it should be remembered that the whole subject is still in the experimental stage. When vaccine therapy was new and in the ascendency, manufacturers offered specific vaccines for almost every human ailment and "mixed vaccines" of startling complexity. The Council on Pharmacy and Chemistry not only rejected most vaccine mixtures but has during recent years been obliged to omit a considerable number of simple vaccines because the results obtained with them did not measure up to the evidence which investigators supplied in the height of enthusiasm. Manufacturers are already marketing bacteriophage preparations, simple and mixed. Warrant for the use of such mixtures has not so far become evident and the Council on Pharmacy and Chemistry has postponed the acceptance of simple preparations to await further evidence in favor of their usefulness. (*Jour. A. M. A.*, July 13, 1929, p. 121).

More Deaths from Thallium.—Three more deaths from thallium poisoning are reported. Three boys, aged ten, eleven and twelve years respectively received successive doses of thallium acetate for ringworm. Although influenza had left one of them apathetic and the other two were mentally dull since birth and all three were undernourished the dose of 0.008 Gm. per Kg. of body weight was either given or its administration begun. The effort to give the calculated amount in divided doses caused death as have other similar attempts. Only one dose should be given and for children infirm in any way, this should be less than the usual amount. (*Jour. A. M. A.*, July 13, 1929, p. 122).

More Misbranded Nostrums.—The following products have been the subject of prosecution by the Food, Drug and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act; Rheu-Salic Tablets (The Waterbury Chemical Co.), containing acetphenetidin and magnesium salicylate in amounts less than declared. Dynell Water (The Dynell Spring Water Co.), containing no ingredient capable of producing the effects claimed. Vibunol Johnson (Johnson's Female Regulator) (E. B. Goico), a water-alcohol solution of drug extracts together with sugar. Migratone Anti-Rheumatic Tablets (The Waterbury Chemical Co.), containing salicylic acid in amount less than claimed. Methalgine Comp. Capsules (The Waterbury Chemical Co.), containing morphine sulphate, acetanilide, acetphenetidin and sodium salicylate in amounts less than claimed. (*Jour. A. M. A.*, July 13, 1929, p. 138)

Tamerici Salts Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that according to the Banfi Products Corporation, Tamerici Salts is "natural salt extracted from the Tamerici Spring of Montecatini", Italy and that the formula given for the product shows that this is almost pure sodium sulphate (Glaubers' Salt). The Council finds Tamerici Salts unacceptable for New and Nonofficial Remedies because it is an unessential modification of sodium sulphate, sold under a noninforming name and without a declaration of composition on the label. Such exploitation is not in the public interest since it tends to confuse the lay mind and increase the tendency to self-medication. (*Jour. A. M. A.*, July 27, 1929, p. 283).

Crystalline Pepsin.—Within a comparatively few months successive announcements of the isolation of crystalline insulin, crystalline tuberculin, crystalline urease and crystalline pepsin have followed one another. This crystalline pepsin possesses all the enzymatic properties; it hydrolyzes gelatin, casein, egg albumin and edestin in acid solution and is rapidly inactivated by alkali or heat. It crystallizes in small prisms. The highest peptic activity thus far secured is about 1:20,000 U.S.P. (*Jour. A.M.A.*, July 27, 1929, p. 285)

Poisoning From Methyl Chloride Used in Domestic Refrigerators.—At the 1929 annual session of the American Medical Association the House of Delegates, recognizing the dangers of toxic gases used in industry and in the home, asked the Board of Trustees to appoint

a committee to look into the situation and to advise the medical profession and the public for the good of the public health. In the meantime additional deaths from the use of methyl chloride in mechanical refrigeration have occurred in Chicago as determined by a special coroner's jury, which has recommended the discontinuance of the use of methyl chloride as rapidly as possible, the temporary use of warning gases with methyl chloride until substitution of some less hazardous gas shall be made, and a definite warning by manufacturers to users of such apparatus as to the hazards involved. (*Jour. A.M.A.*, July 27, 1929, p. 288)

Ford Attacks Medico Ethics

A Recent Newspaper Contribution by Henry Ford.—The caption to these paragraphs is taken from a leading article in a recent Sunday edition of the *Los Angeles Times*. The article in question was one of a series of interviews of Mr. Ford, and was presented under the sponsorship of one of the large newspaper syndicates of the United States.

The auspices under which the interviews were given, and their publication on succeeding Sundays, all indicate that they were duly authorized by the great automobile prince of America, Henry Ford of Detroit. It would seem fair to assume, also, that Mr. Ford spoke deliberately on the different topics selected by him.

The article was no doubt widely read, and its half-truths were probably as thoroughly absorbed and believed by thousands of lay readers, as they were by Mr. Ford himself when he gave the interview. For it is impossible to make oneself think that Mr. Ford would willingly make untruthful statements. What he said may, therefore, be taken as an expression of his beliefs.

Because of his remarkable achievements in the automotive industry and his originality and initiative in building up one of our country's greatest economic achievements, and because of his interesting personality and also because of the wide publicity and acceptance with which his opinions are received by many of his fellow citizens, his criticisms of the medical profession may well be given passing consideration by the members of that profession.

* * *

Two Major Impressions from Mr. Ford's Viewpoint.—Two impressions stand out after the interview has been read. One, that Mr. Ford evidently has only a superficial knowledge of the training standards and methods of practice of modern-day practitioners of nonsectarian medicine. Two, that the nonapplicability or irrelevancy of Mr. Ford's remarks and criticisms rest largely upon his somewhat basic assumption of thought which crops out throughout his supposed analysis, namely, that the stresses and strains to which the human animal body can be put, are as firmly fixed and as easily determined as are those of an automobile, a bridge or other inanimate object; and that the exploitation of the conservation, care and repair of that human body should follow the same advertising principles and methods which are in vogue with producers of such inanimate things as automobiles and other manufactured products.

Of course there is nothing new in such fallacies of reasoning. Medical men learn early that Mr. Ford's general viewpoint concerning medical practice is almost universal in modern-day America. So much is this the case that practitioners of medicine must keep themselves constantly on guard to prevent themselves from falling into the same and similar errors of reasoning. It is at all times a great temptation to overevaluate the success or failure of this, that or the other method of treatment which may rest upon a too limited number of cases or experiences.

For with each human being, the physician's relationship is not with inanimate factors like brick, wood, steel, or mortar the tensile strength and endurance of each type of which can be calculated to a mathematical nicety, and the types of some of which, according to their formulae, can be produced forever with the same qualitative properties. Instead, in the human animal, physicians are called upon to deal with a living or biologic entity, composed, it is true of certain major organs and tissues. But each of these in turn is composed of constituent or cell units, so bound up in the strength and weaknesses inherited from ancestors, and so responsive to previous diseases and habits associated with each individual's environment, that microscopes, electrocardiographs, x-ray machines and other means of accessory investigation, estimation and measurement, as well as all the knowledge and skill which a well educated and well trained physician can acquire, only too often make such a physician realize how limited is human wisdom in its application to the scientific care of a fellow human suffering from any one of a large number of diseases to which that individual is subject.

* * *

Physicians Recognize the Limitations of Medical Science and Art.—Practitioners of nonsectarian medicine recognize the limitations of the science of medicine. In the past and in the present, and also in the future—unless the mediocrity of endeavor which is associated with state medicine should come into play—these nonsectarian practitioners have organized and strenuously fought for educational and training standards that would give lay citizens a fair assurance of intelligent supervision and care when they called in a doctor. Nevertheless these same lay persons as a rule have given very little support to the nonsectarian profession in preventing the passage of laws which give legal sanction to sectarian or cultist practitioners who graduate from schools demanding little more than reading, writing, and arithmetic as a preliminary education instead of courses of collegiate grade; and which schools give professional training of high sounding type as printed in catalogues, but which are little more than a gesture when considered from the standpoint of really scientific professional training.

All Doctors Are Alike to Many Lay Persons.—Many of the laity seemingly make no effort to find out about qualifications when a physician is engaged. To many such lay persons all doctors are alike and presumably of equal training and ability. In view of some of his comments, Mr. Ford, in discussing medical ethics, also seemingly classes all doctors, be they nonsectarian or cultist, as of the same general mold and character. The cutist practitioners, by the way, advertise their methods and remedies just as Mr. Ford advises ethical physicians to do. The sins and deficiencies of these insufficiently trained individuals are then unloaded on the ethical group of nonsectarian practitioners, who acknowledge the limitations not only of the art and science to which they have pledged themselves, but also recognize their own personal limitations as well.

The foregoing remarks are laid down because they may serve as a basis for better approach to some of the comments made by Mr. Ford in his interview.

* * *

Do Professional Ethics Interfere with Legitimate Publicity?—When Mr. Ford states, "But when professional ethics are used to prevent the people from getting proved and tested information, 'professional ethics' do not look so good," he is setting up a straw man which he feels sure he can prove to all the world he can easily knock down.

In connection with the foregoing quotation it may be remarked that it is hoped that he will use some of his wealth to mass the evidence to show that nonsectarian physicians have "prevented the people from getting proved and tested information" on medical matters.

Members of the medical profession who have special facilities for knowledge on this point know of no such attempts to withhold proved and tested information. A physician who discovers anything of value to the human race and who does not give his fellows an opportunity to prove or disprove its worth does not very long remain in good caste in the ethical and nonsectarian medical profession.

* * *

Mr. Ford a Therapeutic Optimist.—In his next paragraph Mr. Ford gives evidence of being a real therapeutic optimist, as witness: "Nearly every day sees some method of surgery or medical treatment which is an improvement on the old."

However, his optimism rapidly gives way to pessimism, for he soon states: "A good many physicians are so busy using their old, accustomed methods of treatment that they haven't time to become informed about new and better methods."

Mr. Ford evidently forgets that an analogous criticism was leveled at him for a number of years, and with far more justice and logic, because he refused to alter to any degree the general shape and construction of the automobile which he had honored with his name. Perhaps some of the physicians who are not swept off their feet by the announcement of every new method of treatment of human ills show the same constructive conservatism which he himself displayed when he held on tightly to something that he felt was very good, in spite of the clamor of exploiters of new and supposedly better automobiles, many of which have already gone into oblivion, just as have many of the supposedly new and better methods of treatment of human ills which were exploited during the same time period.

* * *

Are Physicians Slow in Exploiting New Methods?—Mr. Ford feels that "it is one of the first duties of the profession to see that every step of progress in medical science is given to the public, promptly and fully, and in terms the average man can undersand."

But he surely will wish physicians to retain the right to try out and really prove the worth of new remedies before indulging in exploitation of the same. The danger in medicine is not that physicians do not avail themselves of new discoveries. Every intelligent doctor knows his place in a community depends upon his successful work and he is quick to grasp at methods which make for better results. In the matter of doctors who are not intelligent in that manner, the profession must depend upon the laity to help support laws that will increase the standards of professional training and which thus will give an increasing guarantee of better trained doctors. Unfortunately the laity as a rule not only does not give such support, but permits itself to be misled into support and protection of lower standards of education and training.

Apropos of Mr. Ford's statement about publicity, as just quoted, would it not be proper to suggest that he, as one of the richest men in the world, might here find an admirable place for investment of a few spare millions. A foundation sponsored by him, and dedicated to the dissemination of knowledge that would make for the conservation of human health and life, and the agencies of which foundation could be used to protect all classes of citizens from incompetent practitioners wherever found (although, of course, the lesser the general education, and the poorer the professional training in a group, the larger will be the number of incompetents there to be found), could certainly be of value to the world.

* * *

Do the Same Rules Apply to Manufacturing and Medical Publicity?—Here is another gem from Mr. Ford's interview: "What would happen if the producers of the world's goods assumed the same attitude toward the public (as does the medical profession?" 'Let the public find out what we (the doctors) have to offer, if the public can.'"

As a matter of fact, nonsectarian physicians are very anxious that lay citizens should know what is offered by practitioners of nonsectarian medicine, namely, that they are a group of well-trained men and women physicians, accepting medical facts just as other scientific facts are accepted; using methods that have been proven safe and efficacious, each member of the guild with absolute right and freedom to use any and all measures which appeal to him, but having the support of his fellows only when truthfully and logically carried out; and giving freely to the profession all discoveries redounding to the benefit of the people of the world, without hope or expectation

of personal or economic reward other than the honor which comes through the appreciation of colleagues who recognize the beneficent nature of such contributions.

Because physicians live up to such a code, as a class they do little more than make decent livings for themselves and their families. Through all these years nonsectarian physicians have been the only group in professional or business life who have so consistently lived up to such altruistic principles. Had Mr. Ford applied the same code to his own discoveries, it would not have been possible for him to amass the millions which came to him, because his monopoly of a splendid plan would not have been a monopoly had every other automobile manufacturer been free to use his discoveries.

* * *

How One Great Group of Discoverers were Rewarded.—Mr. Ford, in his interview, speaks kindly of the altruistic spirit in which medical men give to their colleagues, without hope of money recompense, the knowledge and discoveries concerning human diseases. He must acknowledge that this is a most unusual characteristic for any profession or business to have. He can do a big service along this line by calling attention to the almost beggarly governmental pensions given, for instance, to the widows of the Army physicians who showed how yellow fever was spread and who thus made it possible for our own country annually to save millions of dollars in money and hundreds and thousands of human lives.

And only the other day, newspaper dispatches made mention of the United States Public Health Surgeon-General's recommendation that the widow of Doctor Joseph Goldberger, who had given important knowledge to the world concerning pellagra (his wife at the time submitting herself to experiment), be granted a pension of $150 a month. It took much effort to secure pensions for the widows of the yellow fever investigators. Will it take more than one session of Congress to secure this pension for Mrs. Goldberger? Will Mr. Ford have one of his representatives investigate this case and, if proven worthy, use some of his powerful influence to have Mrs. Goldberger receive an expression of decent human appreciation?

Would It Be Better for Physicians to "Patent" Their Discoveries?—Mr. Ford ends his interview by stating, "There are no secrets from the public or from competitors in the industrial and business world except those secrets which are protected by patents and represent the life of a concern. The same company that holds the patents, however, makes no secret of the product, where to get it, how much it will cost, what it will do, etc. . . . . In what respect do doctors stand in a different relation to the public? I see none whatever."

Answering these closing sentences of Mr. Ford, it may be said that, if ethical physicians took out patents on their discoveries, just as did Mr. Ford on his, the world would probably show a greater respect for both medical discoverers and medical discoveries. The ordinary layman is so accustomed to being made to pay well for anything that is good that he is somewhat skeptical of anything that is offered free. So much is this the case, that many of such lay persons, when suffering from real or imaginary ills, turn not to physicians, whom they know have had good training and who are of good reputation, but to the cultist, faddist, or other presumable practitioners of the healing art, who conduct their professional activities on a money basis throughout, and who avail themselves of all direct and indirect publicity and advertising agencies that will make for larger groups of paying clients; and which publicity and advertising agencies Mr. Ford presumably holds ethical physicians should also use.

From what has been here quoted and commented upon, it is to be noted that we are somewhat of the opinion that, while Mr. Ford evidently had the very best intentions in giving his interview, he really was talking and giving somewhat dogmatic advice in matters of which, because of his busy life as a manufacturer and executive, he really had little more than a sparse and superficial knowledge; and that in laying the foundation for his criticisms he led himself into error in his reasoning by having in mind as an analogy to the viable human body a nonliving automobile. So that starting out with insufficient knowledge and illogical analogies, it is not to be wondered at that he gave expression to viewpoints which nonsectarian physicians are not likely to accept.

* * *

Suggestion that Mr. Ford Establish a Medical Publicity Foundation.—However, all this can be overlooked if he will but establish a foundation that will be devoted to legitimate and broad publicity concerning human ailments, so that human health and life in our own country and throughout the world may be the better conserved. If he will do something of this sort, members of the ethical and nonsectarian medical profession will be gratified, because they know that with better knowledge of their problems and efforts will come increasing support of their attempts to constantly maintain and improve the standards of professional training and practice, and to bring into being a greater capacity for service to their lay fellow citizens.—*California and Western Medicine.*

Mental Hygiene Clinic

Dr. Persis F. Elfeld has been appointed Acting Clinical Director of the Mental Hygiene Clinic which is to be opened August 12th. Headquarters will be at the Delaware State Hospital, with subsidiary clinics at Wilmington, Dover and Georgetown.

This clinic consists of a psychiatrist, psychologist, psychiatric social service worker and a clerk. This unit will also have charge of child guidance in this State.

All patients brought to the Clinic must be recommended by physicians, hospitals, institutions, social agencies, courts and schools.

Kindly make appointments by telephoning to the Delaware State Hospital, Farnhurst.

HOSPITAL NEWS

MEDICAL NOTE

The Mental Hygiene Unit of the Delaware State Hospital started operations on Monday, August 12th. Clinics will be held in the three counties as well as at various institutions.

The Unit will adhere to the following schedule temporarily:

MONDAY:

1st—Industrial School for Colored Girls, Marshallton, Del.
2nd—Industrial School for White Girls, Claymont, Del.
3rd—Ferris Industrial School, Marshallton, Delaware.
4th—New Castle County Workhouse.

TUESDAY:

1st—Health Center, 830 Kirkwood St., Wilmington, Del. 9 A. M. to 4 P. M. standard time.
2nd—Health Center, 830 Kirkwood St., Wilmington, Del. 9 A. M. to 4 P. M. standard time.
3rd—Delaware Colony for Feeble Minded, Stockley, Del.
4th, A. M.—Sussex County Poorhouse, Georgetown, Del.
P. M.—Kent County Poorhouse, Wyoming, Delaware.

WEDNESDAY:

1st—New Castle County Poorhouse, Farnhurst, Del.
2nd A. M.—Delaware Commission for Blind, 305 W. 8th St., Wilmington, Del.
P. M.—Children's Bureau of Delaware, 913 Tatnall St., Wilmington, Del.
3rd—Adas Kodesch Center, 511 French St., Wilmington, Del.
4th—Health Center (Colored), 706 French St., Wilmington, Del.

THURSDAY:

1st—Sussex County.
2nd—Kent County.
3rd—Sussex County.
4th—Kent County.

EVERY FRIDAY:

Delaware State Hospital, Farnhurst, Del. 1:30 P. M. to 4 P. M. standard time.

EVERY SATURDAY:

Delaware State Hospital, Farnhurst, Del. 9 A. M. to 11 A. M. standard time.

If there is any change in the above schedule, individual notification will be sent.

We hope every member of the profession will co-operate in this work.

All cases examined at the clinics will be referred either by social agencies, schools, courts or physicians. No voluntary cases will be accepted.

Indirect Injury to Heart by Needles

Penetration of the heart by needles and similar foreign bodies is extremely rare. J. WILLIAM HINTON, New York (*Journal A. M. A.*, July 27, 1929), reports the case of a man, aged 30, who complained of pain in the left side of the chest and slight cough of five weeks' duration. He had been treated by his family physician for influenza but the patient was found to have bronchopneumonia in the left lower lobe at the time of admission. The patient was transferred to the surgical division and a roentgen examination revealed in the left lung a diminution of illumination of the entire lung field because of the presence of fluid in the pleural cavity. A needle measuring about 3½ inches in length lay between the ninth and tenth ribs posteriorly at the posterior axillary line at a point about 2 inches from the spinal column. An operation was performed. The patient did not experience any undue pain at the time of operation and was perfectly well for three and a half hours following, when he suddenly complained of feeling weak and faint. On examination he was found to be in shock and was given cardiac stimulants but died fifteen minutes later. A postmortem examination was performed. When the left side of the chest was opened, the pericardium, which was smooth and glistening, bulged forward and laterally on both sides, displacing the lungs. A bluish color was transmitted through the pericardium, and when the pericardial sac was opened about 1,500 cc. of fluid blood was found. The heart was in normal position but small, weighing about 200 Gm. and pale red. When the hand was placed under the heart in situ a needle was found piercing the back of the heart and pericardium and running into the left ventricle on the posterior surface. The needle appeared to come from about 1 inch below the hilum of the left lung. When the heart was removed, the point at which the needle entered was found to be 1½ inches above the apex on the posterior surface, and was marked by a gaping slit-like wound 1 cm. in length. The left lung was firmly adherent to all surfaces of the left chest cavity. A thoracentesis needle was found in the lower lobe. This was the one mentioned in connection with the heart.

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